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Name  
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November 22, 2004  
Date of Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Ross M. Swan

Serial No. 10/072,070

Group Art Unit 3744

Filed: February 8, 2002

Examiner: H. B. Tanner

For: Year Round Selective Dehumidifying And Humidifying  
Apparatus And Method

BRIEF IN SUPPORT OF APPEAL

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Herewith is appellant's Brief on Appeal in triplicate together with deposit account authorization for payment of the appeal fee.

REAL PARTY IN INTEREST

Ross M. Swan, the inventor, is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no pending appeals or interferences related to this application.

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STATUS OF CLAIMS

Applicant hereby appeals the Examiner's Final Rejection dated May 19, 2004 rejecting claims 1-5.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Rejection of May 19, 2004. The claims in their form as finally rejected by the Examiner are set forth in the attached Appendix.

SUMMARY OF THE INVENTION

Applicant's invention relates generally to the conditioning of air within a building, and more particularly to the extraction of air from a building for the purpose of dehumidifying the air combined with the selective capability of also humidifying the air when desired at certain times of the year.

The method of applicant's invention is for conditioning air within the enclosed space of a building and comprises providing a fan adjacent a bottom floor of the building (Page 6, lines 7-10; 42-Fig. 1A), providing a first conduit for discharging air from the fan to the exterior of the building (Page 5, lines 12-15; 44-Fig. 1A), providing a humidifier in flow communication with the fan (Page 6, lines 14-17; 50-Fig. 1A) and providing a second conduit for placing the humidifier in fluid communication with the enclosed space of the building (Page 6, lines 22-25; 58-Fig. 1A). A single fluid flow path is provided from the bottom floor (14) through fan (42) and humidifier (50). The method further comprises operating the fan (42) to remove air from the bottom floor level (14) and discharge the air through the first conduit (44) to the exterior of the building (Page 7,

lines 1-7), selectively connecting the first conduit (44) to the exterior of the building or the second conduit (58) to the enclosed space (12) (Page 6, lines 23-25) and operating the humidifier (50) when the second conduit (58) is connected to the enclosed space (12) (Page 7, lines 11-16).

The apparatus of applicant's invention for conditioning air within an enclosed space is installed in a building (10-Fig. 1A) having the enclosed space (12), a bottom floor (14) and an outside (20) having an opening above ground (16) level (Page 4, lines 14-20). The apparatus (40) comprises a first conduit (44-Fig. 1A) having an air outlet connected to the wall opening (38) for discharging air through the wall opening to the exterior of the building and further having an air inlet end (Page 5, lines 14-16), a fan (42-Fig. 1A) adjacent the bottom floor (14) and connected to the air inlet end of the first conduit (44) for removing air from the bottom floor (14) level and discharging the air through the conduit (44) and the wall opening (38) to the exterior of the building (Page 5, lines 12-15 and Page 6, lines 1-13), a humidifier (50-Fig. 1A) connected in fluid communication with the air inlet end of the first conduit (44) (Page 6, lines 14-19), and a second conduit (58-Fig. 1A) having one end open to the enclosed space (12) (Page 6, lines 22, 23). The apparatus further comprises a control valve (60-Fig. 1A) for connecting the opposite end of the second conduit (58) to the first conduit (44) between the air outlet and air inlet of the first conduit (Page 6, lines 24, 25). A single flow path exists from the bottom floor (14) level through the fan (42) and humidifier (50) to the control valve (60).

The control valve (60) has a first state allowing fluid flow from the air inlet of the first conduit (44) to the air outlet (38) thereof and blocking flow to the second conduit (58), and control valve (60) has a second state allowing fluid flow from the air inlet end of the first conduit (44) through the second conduit (58) and blocking flow to the air outlet (38) of the first conduit (Page 6, lines 23-25). When the control valve (60) is in the first state the apparatus (40) provides dehumidification of air in the enclosed space (12), and when the control valve (60) is in the second state the apparatus (40) provides humidification in the enclosed space (12).

Thus, the method and apparatus of applicant's invention provides exchange of air in the enclosed space of a building year-round while providing dehumidification while the space is being cooled and provides humidification selectively if desired while the enclosed space is being heated.

#### ISSUES

1. Whether claims 3 and 4 patentably distinguish over Swan (6,021,953) under 35 USC 102(b).
2. Whether claims 1, 2 and 5 patentably distinguish over Swan in view of Freeman (4,147,299) or Fleming et al. (4,526,318) under 35 USC 103(a).

#### GROUPING OF CLAIMS

Claims 1-2 directed to the apparatus of applicant's invention can be grouped together and claims 3-5 directed to the method of applicant's invention can be grouped together. The basis for the grouping is as follows. The method of applicant's invention and the apparatus of applicant's invention are

discussed separately in the Summary of Invention hereinabove. In the Final Rejection, separate rejections were made by the Examiner as to claims 1, 2 (apparatus) and 5 on the one hand and claims 3 and 4 (method) on the other hand. In the Argument which follows, the claims of the above two groups are treated separately.

#### ARGUMENT

The rejection of claims 3 and 4 under 35 USC 102(b) as anticipated by Swan is believed to be improper. In the first place Swan is not believed to be a proper reference under 35 USC 102(b). The instant application claims priority under 35 USC 119(e) based on provisional application no. 60/267,495 filed February 8, 2001 and thus has an effective filing date of February 8, 2001. The issue date of Swan is February 8, 2000. Thus the invention claimed in the instant application was not "patented in this country . . . more than one year prior to the date of application for patent in the United States" required by 35 USC 102(b).

In the second place, Swan does not disclose providing first and second conduits and selectively connecting the first conduit to the exterior of the building or the second conduit to the enclosed space in the manner called for in claim 3 of the instant application. Applicant's invention represents an improvement over the method described in Swan. In Swan the typical operation is that shown in Fig. 1 wherein conduit 44 is connected at one end of the apparatus 40 and at the other end to an outlet 56 for discharging. A separate arrangement is shown in Fig. 2 wherein a humidifier 60 is installed in association with fan 42 and a conduit 70 is provided between fan 42 and an

enclosed space of the building. Applicant's improvement is that the fan, humidifier and first and second conduits are all provided together in a single installation for operation according to a unitary methodology thereby allowing selective connection of the one conduit to the exterior of the building and the second conduit to an enclosed space in the building in conjunction with operation of both the fan and the humidifier (emphasis added).

In view of the foregoing, claims 3 and 4 are believed to patentably distinguish over Swan under 35 USC 102(b).

The rejection of claims 1, 2 and 5 under 35 USC 103(a) based on Swan in view of Freeman or Fleming et al. is believed to be improper. Claims 1, 2 and 5 are believed to patentably distinguish over Swan for the same reasons given above in connection with claims 3 and 4. Contrary to the Examiner's conclusion, it would not be obvious to combine Swan with either Freeman or Fleming et al. in the manner proposed in the Office Action. In Fleming et al. the damper 38 is mounted within the chamber 36 of the fluid exchanger apparatus, not between sections of conduits external to a fan/humidifier apparatus combination. Significantly, the function of the damper in Fleming et al. is for the different functions of controlling the amount of fluid which is exchanged between the inside and outside of an enclosure and that which is recirculated with the enclosure. Furthermore, when damper 38 of Fleming et al. is in the position of Fig. 2, there is flow of air from outside of the building to the interior thereof (arrow 53) and flow of air from the interior of the building to the exterior (arrow 57). In applicant's apparatus, on the other hand, the first state of control valve 60 allows fluid flow only in a direction to the

air outlet 38 of the first conduit 44 and thus to the exterior of the building. In view of these significant differences in structure and function, there would be no motivation to one skilled in the art to combine Fleming et al. with Swan in the manner proposed by the Examiner.

In the arrangement disclosed by Freeman, the valve 30 is located downstream of the region being cooled. In particular, in the Freeman arrangement, the output air flow of fan or blower 35 goes to the disk assembly 12 and motor 23 which are cooled by the air flow and then the air flow enters diverter valve 30. In applicant's apparatus, on the other hand, the control valve (60) is located upstream of the region being cooled, i.e. control valve (60) is located between fan (42) and enclosed space (12). In addition, Freeman's arrangement on the one hand is an air flow system for a disk file, the latter including a disk drive portion and a head disk assembly, whereas applicant's claimed invention, on the other hand, is apparatus for conditioning air within an enclosed space in a building. The problems associated with conditioning air in a building are significantly different from those associated with controlling the temperature of air flowing through a computer disk drive. Accordingly, Freeman is considered to be non-analogous art with respect to applicant's claimed invention. In view of these significant differences in purpose, structure and function, there would be no motivation to one skilled in the art to combine Freeman with Swan in the manner proposed by the Examiner.

Furthermore, because of the structural differences between applicant's claimed apparatus and those of Swan, Fleming et al. and Freeman, even if the proposed combination were to be made, it would not result in applicant's claimed invention.

In view of the foregoing, claims 1, 2 and 5 are believed to patentably distinguish over Swan, Freeman and Fleming et al.

under 35 USC 103(a)




CONCLUSION

The Board is respectfully requested to reverse the 35 USC 102(b) and 35 USC 103(a) rejections of record, for the reasons set forth above, and find that claims 1-5 define patentable subject matter over the art of record.

Respectfully submitted,

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APPENDIX

CLAIMS ON APPEAL

1. In combination with a building having an enclosed space, a bottom floor, and an outside wall having an opening above ground level, apparatus for conditioning air within the enclosed space, the apparatus comprising first conduit means having an air outlet and connected to said wall opening for discharging air through said wall opening to the exterior of the building and further having an air inlet end, a fan means adjacent the bottom floor and connected to said air inlet end of said first conduit means for removing air from the bottom floor level and discharging the air through said conduit means and the wall opening to the exterior of the building, and the apparatus further comprising a humidifier connected in fluid communication with the air inlet end of said first conduit means, second conduit means having one end open to the enclosed space, and a control valve for connecting the opposite end of said second conduit means to said first conduit means between the air outlet and the air inlet end thereof, there being a single fluid flow path from said bottom floor level through said fan and said humidifier to said control valve, said control valve having a first state allowing fluid flow from the air inlet end of said first conduit means to the air outlet thereof and blocking flow to said second conduit means and having a second state allowing flow from the air inlet end of said first conduit means through said second conduit means and blocking flow to the air outlet of said first conduit means whereby when said control valve is in said first state said apparatus provides dehumidification of air in the enclosed space and when said control valve is in said

second state said apparatus provides humidification of air in the enclosed space.

2. A combination according to claim 1, wherein said humidifier is located between said fan means and the bottom floor and said single fluid flow path is defined from the bottom floor level through said humidifier and through said fan means to the air inlet end of said first conduit means.

3. A method for conditioning air within the enclosed space of a building comprising:

- (a) providing a fan adjacent a bottom floor of the building;
- (b) providing a first conduit for discharging air from the fan to the exterior of the building;
- (c) providing a humidifier in flow communication with the fan;
- (d) providing a second conduit for placing the humidifier in fluid communication with the enclosed space of the building;
- (e) providing a single fluid flow path from the bottom floor through the fan and humidifier;
- (f) operating the fan to remove air from the bottom floor level and discharge the air through the first conduit to the exterior of the building;

(g) selectively connecting the first conduit to the exterior of the building or the second conduit to the enclosed space; and

(h) operating the humidifier when the second conduit is connected to the enclosed space.

4. A method according to claim 3, wherein providing the humidifier in flow communication with the fan includes locating the humidifier between the fan and the bottom floor and providing said single fluid flow path from the bottom floor level through the humidifier and through the fan to the first and second conduits.

5. A method according to claim 3, wherein selectively connecting the first conduit or the second conduit is performed by means of a valve connected to the first and second conduits.